

Abekas® 8150 / Dveous™ Switcher & DVE
vs.
Sony DVS-2000C / DME-7000 Switcher & DVE
A Value Statement

Overview

The Abekas 8150 Production Switcher and the Abekas Dveous Digital Video Effects easily out-powers the Sony DVS-2000C / DME-7000 switcher and DVE package. While the Abekas combination is comparably priced to the Sony equipment, this package provides far higher value in production quality and capabilities. This document will delineate the significant value points that justify purchasing a slightly more expensive package.

The Abekas 8150 vs. the Sony DVS-2000C

The Abekas 8150 meets and/or exceeds nearly all capabilities of the DVS-2000C. Additionally, the 8150 has numerous significant features which are unavailable on the Sony product. The Abekas 8150 is a larger switcher than the DVS-2000C. Although the physical size and I/O capabilities are similar for both units, the Abekas 8150 has been designed with a true M/E and Program/Preset architecture. This allows the operator to wipe or mix to a preset effect on the Mix Effects bank or even run effects on both banks simultaneously. This additional effects bank extends the 8150's effects and compositing capabilities beyond that of the Sony device.

Unlike the Sony unit, the Abekas 8150 provides complete, internal matrix routing of all inputs to any crosspoint, and to any key or wipe border. This provides quick and easy compositing of up to seven video images in a single pass.

The 8150 provides timeline-based effects creation. Effects can be freely split among four independent timelines, making it easy to adjust the timing of one effect against another. When run in the timeline mode, the Sony edit controller can run the timeline like a VTR, making matchframes, even in the middle of an effect easy to accomplish. One can easily integrate both the normal RS-422 switcher interface and the VTR interface through an RS-422 patch bay.

While both switchers offer impressive key modifiers (borderlines, emboss, outline, shadow, etc.) only the 8150 allows for the smooth, real-time animation of these effects under the timeline system. The mBoss™ border generator uses 1/32 subpixel processing to eliminate the jagged edges you see on most switcher borders.

The 8150 switcher is readily equipped with two options that are not available in the Sony device. The 8150-CCR provides seven fully functional RGB/YUV color correctors inside the 8150.

One is available on each of the seven busses (program, preset, M/E foreground and background, plus all three key busses).

Only the 8150 has an internal hard drive, floppy drive and optional Jaz™ drive mounting kit. Video can be grabbed in both framestores and stored in native 10bit YUV format to any of the drives. This exceptional feature provides ready access to frequently used graphics, still and mattes. Video and key graphics created on a PC can be imported into the framestores by way of the floppy drive or Jaz drive. Video grabs can likewise be transferred via disk to Photoshop and other graphics applications for integration in print and multimedia projects. The hard drive also stores a complete range of switcher setups including engineering, personality, and SuperMatte backgrounds.

The following table is based on our best available information regarding the DVS-2000C vs. the Abekas 8150. All references are based on feature set published in the Sony DVS-2000C product guide, (part # BC-00585).

FEATURE	DVS-2000C	8150	NOTES
DME-LINK	Yes	Similar	The 8150 timeline will run the Abekas Dveous timeline under LINC control.
Processed Key	Optional	Standard	
System Integration	Yes	Yes	Standard Sony and GVG 200 protocol are provided.
M/E Structure	M/E Only	M/E & Pgm/Preset	An additional bus extends the 8150's effects and transition capabilities
Inputs and V-Proc	Yes	Yes +	The 8150's auto-timing window is larger (-1/+2 lines). Also, the supplied 8150-CCR color corrector allows additional RGB & YUV color correction on each bus or source.
Effects and DSK	2 Keyers + <i>optional</i> DSK	2 Keyers + identical DSK	The 8150 shares all keyer capabilities with the 2000 except for "Depth Key Processing." The 8150 DSK supports full luma and chroma key features.
"FineKey" Processing	Yes	Yes	The 8150 keyer has similar capabilities
Enhanced Wipe Gen	Option	Standard	The 8150 offers a 2 nd wipe generator to the M/E, Video in the wipe border, border transparency control, 200% screen softness and width. Matrix wipes, as well as mixed, morphing and modulating wipes are included.

FEATURE	DVS-2000C	8150	NOTES
System Switchable	Yes	Yes	525 & 625, 4:3 and 16:9 are supported
Assignable outputs	Yes	Yes	8150 offers an SDI pww and an assignable CAV monitoring output. Four assignable Aux. outs are also included.
Key Modifiers	Yes	Some	The 8150 doesn't support an independent pattern generator/ and dual matte generator per keyer. The 8150 does allow for similar border generator functions. Unique to the 8150 is the ability to keyframe movement and changes in these attributes.
Advanced Chroma Keyer	No– BKDS-2032 option required	Yes	The 8150's superior keying is standard on all three keyers. The 8150 Chroma Keyer allows multiple picks to expand keyer range and "Dual Patch" keying from two independent colors. An on screen color picker simplifies color selection.
Snapshots and Memory Pack	Proprietary	PC Disk Based	The 8150 provides for 24 snapshots plus 99 timelines stored in RAM. Also, standard floppy and Hard Drive technology allows for massive storage of timelines, snapshots and setups.
Dual Matte Generators	Yes	Similar	8150 includes a three-color matte generator with fully modifiable wipe patterns. It is assignable to key and wipe borders.
Frame Memories	Yes	Exceeds	Frame grabs can be stored to disk, loaded from disk, imported from PC, etc. The 8150 does not support Z-Depth keying.
Aux. Bus	Yes	Yes	
Processed Key	Yes	Yes	

Conclusion

The additional effects bank, keying and layering capabilities, internal signal routing, color correction, and hard drive storage for frame grabs and switcher settings make the 8150 a significantly better value for post production application.

Abekas Dveous vs. Sony DME-7000

The Abekas Dveous system may look similar to the Sony DME-7000, but careful analysis identifies the significant benefits of owning the Dveous.

First, Dveous and previous generation Abekas DVEs represent the worldwide industry standard for DVEs in sports, live and post production. Dveous is the specified choice in the world's biggest TV events including the Academy Awards, CBS Football and ESPN Sports. The ability to share Dveous effects files from live productions to post production is a real and valuable feature. Effects are stored on floppy disks for easy "sneaker-netting." Effects can even be shared on the internet (e.g. see www.editsuite.com).

Because of Dveous' twin-channel architecture, a single channel of Dveous exceeds the capabilities of a single channel of DME-7000. For example, within a single Dveous twin-channel, one is able to:

- Fly two boxes with all transform features available on both channels
- Use a key signal to shape the video and independently adjust the key signal with all Dveous attributes
- Use a key signal to shape the video and an independently transformable matte shadow. The shadow can be adjusted with all features of Dveous.

Compare that with the DME-7000. The DME Duality feature provides only basic effects on their "sub-channel." Reviewing the DME-7000 product guide, the DME-7000 sub-channel doesn't seem to support warps or lighting. In the guides section on Duality, Sony indicates the available effects are limited to:

3-D Location and Rotation	Bevel Edge
Posterization	Color Correction
Solarization	Metallic
Sepia	Freeze
Monochrome	Border
Contrast	Mask

In reviewing what Sony identifies as "Standard Effects" for the DME-7000, you'll find what's not available, including:

Axis location	Compression/Expansion
Perspective	Skew
Aspect	Crop

So, while Duality provides a way to get dual sources on screen simultaneously, the flexibility of the sub-channel is quite limited compared to Dveous. In the Dveous twin-channel, two videos can be completely processed with all tools available. Both sources can be freely moved, warped, lit, and textured, etc.. The two channels can also intersect with full control over the intersection. Further, an additional video source can be processed in the background simultaneously.

Another way to utilize Dveous' twin-channel architecture is in the Video/Key mode. Dveous allows you complete freedom in processing the key signal. The key signal can be blurred to soften keys or sized and positioned to reveal the fill. Plus the key signal can even be lit to create unique glassy effects.

Dveous goes even further with the Video/Key and SuperShadow. In this mode, Dveous supersedes Sony's "Advanced Shadow Effects" which offers only shadow size, perspective, defocus and perspective/fade. Dveous allows shadow creation in the shape of the key signal, and shadow processing with every function from 3-D size, position and perspective to lights, warps and corner pinning on the shadows. You can even build a separate timeline just for the shadow! Compare this with the DME-7000 which doesn't even allow a drop shadow when you are warping video.

Sony's optional lighting package is complicated to operate and limited in versatility. SurfaceFX™, a standard feature on Dveous offers dual color light sources on each channel with true 3D positioning. Both reflective, specular lighting and image based, diffuse lighting offer distinct and different looks. Spot, bar and flood light types with variable focus control enhance the realism. Surface textures (from live video, an internal pattern store, or an imported JPEG file) interact with the light sources, showing proper highlights and shadows embossed in the video. These Dveous feature are used extensively in telecasts by CBS, NBC, ABC, ESPN and other sports producers, typically in the bump to a replay and picture shrink for score updates from other games. If one wants a similar look, only Dveous can provide it.

Dveous has many effect design and efficiency features that are simply not available in the Sony DME-7000. Here are some of Dveous' unique capabilities:

Enhanced Motion Path Control

Dveous provides the expected motion control types such as jump, linear, and smooth-linear path types. In addition, Dveous offers a number of motion types that allow special motion such as Smooth motion and dual TCB (Tension, Continuity and Bias) controls. These motion controls allow Dveous to look ahead (and behind). With the influence of more keyframes, smoother more realistic effects can be created.

Nested Local and Global Channels

Dveous has four separate sets of 3D Controls for the ultimate in effects creation and ease of management. Dveous provides the operator with separate source and target 3D transform spaces, nested for multiple motions at one time. Nested source and target global 3D transforms then provide four levels of 3D transform space. Center of rotation cursors show the channel ID and rotation axis.

TimeFrame's Effects Editor

Dveous' TimeFrame Effects Editor gives the operator unparalleled control over the creation and timing of effects. Five timelines are provided, one for each channel, plus one for the global channel. With two or more timeline's in an effect, each timeline runs simultaneously with, but independently of the others. You can offset the relative start and end time of each timeline (including the global timeline) creating complex, perfectly timed effects.

Target Framestore Z Depth

Depth information is stored in the Target Framestore. This allows Z-Axis keying for intersecting plane effects between any channels and the framestore elements. You can also fly live video between previously frozen images that are stored in the Target Framestore.

Intersecting Planes

Of course, Dveous features fully definable intersections between each channel and the Target Framestore.

Solid Builder

Unlike the limited "Brick Effect" functions of the DME-7000, Dveous can create slabs and cubes at the touch of a button with video on multiple sides. Even better, Dveous' Solid Builder allows the user to dynamically position video in each side of the object. This allows, for example, perfect framing of logos on slab edges.

OrbitalFX™

Abekas breaks new ground with this revolutionary DVE effects design tool. Just imagine 24 user settable oscillators per channel and what you can do to create stunning new effects. This one must be seen.

Abekas Brand

The industry leader in DVEs for sports, live and post applications, Abekas Dveous is a marketable name in your suite!

Conclusion

On a price/value basis the Dveous meets and exceeds the limits of the DME-7000. Dveous configurations provide a facility a path for future growth within the system itself. Effects options can be easily added at any time. When one twin channel of processing is no longer enough, another twin-channel can be easily added with the installation of a single board. Dveous can even be upgraded to it's quad twin channel version, Brutus.

Combined with the 8150 switcher, this package provides a dramatically expanded production toolkit for producers, directors and editors. While the cost is similar to the Sony equipment, a decision to choose Abekas equipment will meet current needs while providing a path for the future development of the system well into the future.